

CLAIMS

What is claimed is:

- 1 1. A system comprising:
 - 2 a first dispatcher having a local dispatch table including data;
 - 3 at least a second dispatcher coupled with the first dispatcher, the second dispatcher
 - 4 having a local dispatch table including at least a portion of the data; and
 - 5 a plurality of servers coupled with each of the first dispatcher and the second dispatcher.
- 1 2. The system of claim 1, further comprising a router having a port coupled
 - 2 with each of the first dispatcher and the second dispatcher.
- 1 3. The system of claim 2, the port of the router exhibiting port trunking.
- 1 4. The system of claim 1, the first dispatcher and the second dispatcher
 - 2 exhibiting identical network addresses.

5. A system comprising:

a router having a port;

a first dispatcher coupled with the port, the first dispatcher having a local dispatch table

including at least one session entry identifying a client and a selected server;

at least a second dispatcher coupled with the port, the second dispatcher having a local

dispatch table including a session entry identifying the client and the selected

server;

a network, each of the first dispatcher and the second dispatcher coupled with the

network; and

a plurality of servers, each of the plurality of servers coupled with the network.

6. The system of claim 5, the network comprising a system area network.

7. The system of claim 6, the system area network exhibiting an InfiniBand[®]
architecture.

8. The system of claim 5, wherein the router is coupled with one of a Local
Area Network, a Wide Area Network, a Metropolitan Area Network, and the Internet.

9. The system of claim 5, the port of the router exhibiting port trunking.

1 10. The system of claim 5, the first dispatcher and the second dispatcher
2 exhibiting identical network addresses.

1 11. The system of claim 5, the plurality of servers comprising:
2 a first server group providing a first application; and
3 at least a second server group providing a second, different application.

1 12. The system of claim 11, each of the first server group and the second
2 server group comprising at least one server.

1 13. A method comprising:
2 maintaining a local dispatch table in each dispatcher of a plurality of dispatchers, said
3 each dispatcher coupled with a plurality of servers; and
4 placing at least shared data in the local dispatch table of said each dispatcher.

1 14. The method of claim 13, further comprising broadcasting a dispatch table
2 update from one dispatcher to all other dispatchers of the plurality of dispatchers.

1 15. The method of claim 13, the shared data identifying at least one client and
2 a selected server of the plurality of servers.

1 16. A method comprising:
2 placing a session entry in a local dispatch table of one dispatcher of a plurality of
3 dispatchers, the session entry identifying a client and a server selected from a
4 plurality of servers coupled with the plurality of dispatchers; and
5 broadcasting a dispatch table update to all other dispatchers of the plurality of
6 dispatchers, the dispatch update identifying the client and the selected server.

1 17. The method of claim 16, further comprising placing a session entry in a
2 local dispatch table of each dispatcher of said all other dispatchers, the session entry
3 identifying the client and the selected server.

1 18. The method of claim 16, further comprising transmitting a packet from
2 said one dispatcher to the selected server.

1 19. A method comprising:
2 receiving a packet at one dispatcher of a plurality of dispatchers, the packet including a
3 connection request from a client;
4 placing a session entry in a local dispatch table of said one dispatcher, the session entry
5 identifying the client and a server selected from a plurality of servers coupled
6 with the plurality of dispatchers; and
7 broadcasting a dispatch table update to all other dispatchers of the plurality of
8 dispatchers.

1 20. The method of claim 19, further comprising:

2 receiving the dispatch table update at each dispatcher of said all other dispatchers; and
3 placing a session entry in a local dispatch table of said each dispatcher, the session entry
4 identifying the client and the selected server.

1 21. The method of claim 19, further comprising:

2 receiving a second packet at another dispatcher of the plurality of dispatchers;
3 searching the local dispatch table of said another dispatcher to identify the selected
4 server; and
5 transmitting the second packet to the selected server.

1 22. The method of claim 21, wherein said another dispatcher and said one
2 dispatcher comprise the same dispatcher of the plurality of dispatchers.

1 23. The method of claim 21, wherein the second packet includes a termination
2 request from the client, the method further comprising:
3 removing the session entry from the local dispatch table of said another dispatcher; and
4 broadcasting another dispatch table update from said another dispatcher to all remaining
5 dispatchers of the plurality of dispatchers, said another dispatch table update
6 indicating the removal of the session entry.

1 24. The method of claim 23, further comprising removing the session entry
2 from the local dispatch table of each dispatcher of the remaining dispatchers.

1 25. The method of claim 23, further comprising terminating a session
2 corresponding to the session entry.

1 26. A method comprising:
2 receiving a packet at a router coupled with a plurality of dispatchers, the plurality of
3 dispatchers coupled with a plurality of servers;
4 selecting a dispatcher from the plurality of dispatchers; and
5 transmitting the packet to the selected dispatcher.

1 27. The method of claim 26, further comprising arbitrarily selecting the
2 selected dispatcher from the plurality of dispatchers.

1 28. The method of claim 26, further comprising:
2 searching a local dispatch table of the selected dispatcher to determine a selected server
3 of the plurality of servers; and
4 transmitting the packet from the selected dispatcher to the selected server.

1 29. A method comprising:
2 receiving a packet at a router having a port coupled with a plurality of communication
3 links, each of the plurality of communication links coupled with one dispatcher of
4 a plurality of dispatchers, the plurality of dispatchers coupled with a plurality of
5 servers;
6 selecting a communication link from the plurality of communication links; and
7 transmitting the packet over the selected communication link to a corresponding
8 dispatcher coupled with the selected communication link.

1 30. The method of claim 29, further comprising arbitrarily selecting the
2 selected communication link from the plurality of communication links.

1 31. The method of claim 29, further comprising:
2 searching a local dispatch table of the corresponding dispatcher to determine a selected
3 server of the plurality of servers; and
4 transmitting the packet from the corresponding dispatcher to the selected server.

1 32. A method comprising:
2 receiving a packet at one dispatcher of a plurality of dispatchers, the plurality of
3 dispatchers coupled with a plurality of servers;
4 searching a local dispatch table of said one dispatcher;
5 transmitting the packet from said one dispatcher to a server of the plurality of servers if
6 the local dispatch table identifies the server; and
7 transmitting the packet from said one dispatcher to a locking dispatcher of the plurality of
8 dispatchers if the local dispatch table includes a client lock.

1 33. The method of claim 32, wherein the local dispatch table includes the
2 client lock, the method further comprising:
3 selecting a server from the plurality of servers; and
4 transmitting the packet from the locking dispatcher to the selected server.

1 34. The method of claim 33, further comprising broadcasting a dispatch table
2 update from the locking dispatcher to all other dispatchers of the plurality of dispatchers,
3 the dispatch table update identifying the selected server and indicating removal of the
4 client lock.

1 35. A method comprising:

2 receiving a first packet at one dispatcher of a plurality of dispatchers, the first packet
3 including a connection request from a client;
4 creating a client lock on packets received from the client; and
5 broadcasting a dispatch table update from said one dispatcher to all other dispatchers of
6 the plurality of dispatchers, the dispatch table update indicating the client lock.

1 36. The method of claim 35, further comprising:

2 receiving at least a second packet at another dispatcher of the plurality of dispatchers; and
3 transmitting the second packet from said another dispatcher to said one dispatcher.

1 37. The method of claim 36, further comprising:

2 selecting a server from a plurality of servers coupled with the plurality of dispatchers; and
3 transmitting the first packet and the second packet to the selected server.

1 38. The method of claim 37, further comprising broadcasting another dispatch

2 table update from said one dispatcher to said all other dispatchers, said another dispatch
3 table update identifying the selected server and indicating removal of the client lock.

1 39. A method comprising:
2 receiving a packet at a router having a port coupled with a plurality of dispatchers, the
3 packet including a connection request from a client;
4 transmitting the packet from the router to a first dispatcher of the plurality of dispatchers;
5 selecting a server from a plurality of servers coupled with the plurality of dispatchers;
6 placing a session entry in a local dispatch table of the first dispatcher, the session entry
7 identifying the client and the selected server;
8 broadcasting a dispatch table update from the first dispatcher to all other dispatchers of
9 the plurality of dispatchers, the dispatch table update identifying the client and the
10 selected server; and
11 transmitting the packet to the selected server.

1 40. The method of claim 39, further comprising:
2 selecting a communication link from a plurality of communication links, each of the
3 plurality of communication links coupling one of the plurality of dispatchers with
4 the port of the router; and
5 transmitting the packet over the selected communication link to the first dispatcher.

1 41. The method of claim 40, further comprising randomly selecting the
2 communication link from the plurality of communication links.

1 42. The method of claim 39, further comprising:
2 determining a load on each of the plurality of servers; and
3 selecting the server at least partially in response to the load on said each server.

1 43. The method of claim 39, further comprising:
2 identifying an application associated with the packet; and
3 selecting the server at least partially in response to the identified application.

1 44. The method of claim 43, further comprising:
2 placing a client lock on the packet;
3 receiving at least one other packet at another dispatcher of the plurality of dispatchers;
4 and
5 transmitting said at least one other packet from said another dispatcher to the first
6 dispatcher.

1 45. The method of claim 39, further comprising replacing in the packet a
2 network address associated with each of the plurality of dispatchers with a network
3 address of the selected server.

1 46. An article of manufacture comprising:

2 a machine accessible medium, the machine accessible medium providing instructions

3 that, when executed by a machine, cause the machine to

4 maintain a local dispatch table in each dispatcher of a plurality of dispatchers, said

5 each dispatcher coupled with a plurality of servers; and

6 place at least shared data in the local dispatch table of said each dispatcher.

1 47. The article of manufacture of claim 46, wherein the instructions, when

2 executed, further cause the machine to broadcast a dispatch table update from one

3 dispatcher to all other dispatchers of the plurality of dispatchers.

1 48. The article of manufacture of claim 47, the shared data identifying at least

2 one client and a selected server of the plurality of servers.

1 49. An article of manufacture comprising:

2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to

4 place a session entry in a local dispatch table of one dispatcher of a plurality of

5 dispatchers, the session entry identifying a client and a server selected

6 from a plurality of servers coupled with the plurality of dispatchers; and

7 broadcast a dispatch table update to all other dispatchers of the plurality of

8 dispatchers, the dispatch update identifying the client and the selected

9 server.

1 50. The article of manufacture of claim 49, wherein the instructions, when

2 executed, further cause the machine to create a session entry in a local dispatch table of

3 each dispatcher of said all other dispatchers, the session entry identifying the client and

4 the selected server.

1 51. The article of manufacture of claim 49, wherein the instructions, when

2 executed, further cause the machine to transmit a packet from said one dispatcher to the

3 selected server.

1 52. An article of manufacture comprising:
2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to
4 receive a packet at one dispatcher of a plurality of dispatchers, the packet
5 including a connection request from a client;
6 place a session entry in a local dispatch table of said one dispatcher, the session
7 entry identifying the client and a server selected from a plurality of servers
8 coupled with the plurality of dispatchers; and
9 broadcast a dispatch table update to all other dispatchers of the plurality of
10 dispatchers.

1 53. The article of manufacture of claim 52, wherein the instructions, when
2 executed, further cause the machine to:
3 receive the dispatch table update at each dispatcher of said all other dispatchers; and
4 place a session entry in a local dispatch table of said each dispatcher, the session entry
5 identifying the client and the selected server.

1 54. The article of manufacture of claim 53, wherein the instructions, when
2 executed, further cause the machine to:
3 receive a second packet at another dispatcher of the plurality of dispatchers;
4 search the local dispatch table of said another dispatcher to identify the selected server;
5 and
6 transmit the second packet to the selected server.

1 55. The article of manufacture of claim 54, wherein said another dispatcher
2 and said one dispatcher comprise the same dispatcher of the plurality of dispatchers.

1 56. The article of manufacture of claim 53, the second packet including a
2 termination request from the client, wherein the instructions, when executed, further
3 cause the machine to:
4 remove the session entry from the local dispatch table of said another dispatcher; and
5 broadcast another dispatch table update from said another dispatcher to all remaining
6 dispatchers of the plurality of dispatchers, said another dispatch table update
7 indicating the removal of the session entry.

1 57. The article of manufacture of claim 56, wherein the instructions, when
2 executed, further cause the machine to remove the session entry from the local dispatch
3 table of each dispatcher of the remaining dispatchers.

1 58. The article of manufacture of claim 56, wherein the instructions, when
2 executed, further cause the machine to terminate a session corresponding to the session
3 entry.

1 59. An article of manufacture comprising:
2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to
4 receive a packet at a router coupled with a plurality of dispatchers, the plurality of
5 dispatchers coupled with a plurality of servers;
6 select a dispatcher from the plurality of dispatchers; and
7 transmit the packet to the selected dispatcher.

1 60. The article of manufacture of claim 59, wherein the instructions, when
2 executed, further cause the machine to arbitrarily select the selected dispatcher from the
3 plurality of dispatchers.

1 61. The article of manufacture of claim 59, wherein the instructions, when
2 executed, further cause the machine to:
3 search a local dispatch table of the selected dispatcher to determine a selected server of
4 the plurality of servers; and
5 transmit the packet from the selected dispatcher to the selected server.

1 62. A article of manufacture comprising:
2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to
4 receive a packet at a router having a port coupled with a plurality of
5 communication links, each of the plurality of communication links
6 coupled with one dispatcher of a plurality of dispatchers, the plurality of
7 dispatchers coupled with a plurality of servers;
8 select a communication link from the plurality of communication links; and
9 transmit the packet over the selected communication link to a corresponding
10 dispatcher coupled with the selected communication link.

1 63. The article of manufacture of claim 62, wherein the instructions, when
2 executed, further cause the machine to arbitrarily select the selected communication link
3 from the plurality of communication links.

1 64. The article of manufacture of claim 62, wherein the instructions, when
2 executed, further cause the machine to:
3 search a local dispatch table of the corresponding dispatcher to determine a selected
4 server of the plurality of servers; and
5 transmit the packet from the corresponding dispatcher to the selected server.

1 65. A article of manufacture comprising:

2 a machine accessible medium, the machine accessible medium providing instructions

3 that, when executed by a machine, cause the machine to

4 receive a packet at one dispatcher of a plurality of dispatchers, the plurality of

5 dispatchers coupled with a plurality of servers;

6 search a local dispatch table of said one dispatcher;

7 transmit the packet from said one dispatcher to a server of the plurality of servers

8 if the local dispatch table identifies the server; and

9 transmit the packet from said one dispatcher to a locking dispatcher of the

10 plurality of dispatchers if the local dispatch table includes a client lock.

1 66. The article of manufacture of claim 65, the local dispatch table including

2 the client lock, wherein the instructions, when executed, further cause the machine to:

3 select a server from the plurality of servers; and

4 transmit the packet from the locking dispatcher to the selected server.

1 67. The article of manufacture of claim 66, wherein the instructions, when

2 executed, further cause the machine to broadcast a dispatch table update from the locking

3 dispatcher to all other dispatchers of the plurality of dispatchers, the dispatch table update

4 identifying the selected server and indicating removal of the client lock.

1 68. A article of manufacture comprising:
2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to
4 receive a first packet at one dispatcher of a plurality of dispatchers, the first
5 packet including a connection request from a client;
6 create a client lock on packets received from the client; and
7 broadcast a dispatch table update from said one dispatcher to all other dispatchers
8 of the plurality of dispatchers, the dispatch table update indicating the
9 client lock.

1 69. The article of manufacture of claim 68, wherein the instructions, when
2 executed, further cause the machine:
3 receive at least a second packet at another dispatcher of the plurality of dispatchers; and
4 transmit the second packet from said another dispatcher to said one dispatcher.

1 70. The article of manufacture of claim 69, wherein the instructions, when
2 executed, further cause the machine to:
3 select a server from a plurality of servers coupled with the plurality of dispatchers; and
4 transmit the first packet and the second packet to the selected server.

1 71. The article of manufacture of claim 70, wherein the instructions, when
2 executed, further cause the machine to broadcast another dispatch table update from said
3 one dispatcher to said all other dispatchers, said another dispatch table update identifying
4 the selected server and indicating removal of the client lock.

1 72. A article of manufacture comprising:
2 a machine accessible medium, the machine accessible medium providing instructions
3 that, when executed by a machine, cause the machine to
4 receive a packet at a router having a port coupled with a plurality of dispatchers,
5 the packet including a connection request from a client;
6 transmit the packet from the router to a first dispatcher of the plurality of
7 dispatchers;
8 select a server from a plurality of servers coupled with the plurality of
9 dispatchers;
10 place a session entry in a local dispatch table of the first dispatcher, the session
11 entry identifying the client and the selected server;
12 broadcast a dispatch table update from the first dispatcher to all other dispatchers
13 of the plurality of dispatchers, the dispatch table update identifying the
14 client and the selected server; and
15 transmit the packet to the selected server.

1 73. The article of manufacture of claim 72, wherein the instructions, when
2 executed, further cause the machine to:
3 select a communication link from a plurality of communication links, each of the
4 plurality of communication links coupling one of the plurality of dispatchers with
5 the port of the router; and
6 transmit the packet over the selected communication link to the first dispatcher.

1 74. The article of manufacture of claim 73, wherein the instructions, when
2 executed, further cause the machine to randomly select the communication link from the
3 plurality of communication links.

1 75. The article of manufacture of claim 72, wherein the instructions, when
2 executed, further cause the machine to:
3 determine a load on each of the plurality of servers; and
4 select the server at least partially in response to the load on said each server.

1 76. The article of manufacture of claim 72, wherein the instructions, when
2 executed, further cause the machine to:
3 identify an application associated with the packet; and
4 select the server at least partially in response to the identified application.

1 77. The article of manufacture of claim 76, wherein the instructions, when
2 executed, further cause the machine to:
3 place a lock on the packet;
4 receive at least one other packet at another dispatcher of the plurality of dispatchers; and
5 transmit said at least one other packet from said another dispatcher to the first dispatcher.

1 78. The article of manufacture of claim 72, wherein the instructions, when
2 executed, further cause the machine to replace in the packet a network address associated
3 with each of the plurality of dispatchers with a network address of the selected server.